AMENDMENTS TO THE CLAIMS

1. (currently amended) A microarray comprising:

a substrate;

a number of features comprising probe molecules, each feature located at a different position on a surface of the substrate; and

at least one reference pattern that comprises a number of pattern blocks, each pattern block comprising positive and negative control features and including an arrangement of one or more nearest-neighbor, positive-control features around a central feature, a comparison of computed positions for reference-pattern features to reference-pattern feature positions, following scanning of the microarray, indicating a feature extractability problem.

2. (original) The microarray of claim 1 wherein the reference pattern includes a pattern block for each possible arrangement of one or more nearest-neighbor positive-control features around a central, positive-control feature and for each possible arrangement of one or more nearest-neighbor, positive-control features around a central, negative-control feature.

3. (original) The microarray of claim 1 wherein the reference pattern comprises a two-dimensional array of pattern blocks.

4. (currently amended) The microarray of claim 1 wherein features that include interior and boundary features are arranged in a hexagonal packing arrangement on the surface of the substrate, each interior feature having 4 nearest-neighbor features.

5. (original) The microarray claim 1 wherein the reference pattern is positioned at one or more corners of the microarray.

6. (original) The microarry of claim 1 wherein the reference pattern is positioned at one or more opposing diagonal corners of the microarray.

7. (original) A kit comprising a microarray of claim 1.

8. (original) The kit according to claim 7 wherein the microarray comprises reference-pattern features, each reference-pattern feature further comprising a set of different probe molecules that can bind to respective targets within a biological sample.

9. (original) A kit comprising:

a microarray of claim 1; and

a set of reference targets that bind to the features of the pattern blocks when the microarray is exposed to the reference targets so that the features of the pattern blocks bound by the reference targets represent multiple different arrangements of one or more nearest neighbor positive control features around a central feature.

10. (original) The kit according to claim 9 wherein the features of the pattern blocks bound by the reference targets represent all of the different arrangements of one or more nearest neighbors around a central feature.

11. (original) The kit according to claim 9 further comprising instructions to expose the array to the reference targets.

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